

encouragement to others whose claims are not justified. This short-sighted view, which is so common today, is directly responsible for the rapid increase in the number of malpractice claims in some sections of the country. If cases based upon unjust or absurd claims are permitted to receive even a slight profitable return, there will be an incentive to bring more of them.

It is a great temptation for a doctor to rid himself of these nuisance claims by making a small settlement. The unfavorable publicity, the loss of time, and the mental and emotional strain involved in defending a malpractice suit may lead the physician to compromise. But, as is so often the case, the easiest way out of a situation is seldom the best. For the sake of both himself and his colleagues, the doctor should make a determined opposition to any unjustified claim.

The task of defending a malpractice case is one which requires a high degree of specialization, as well as a peculiar aptitude on the part of the attorney. He must be able to understand the medical problem presented in each case; for it is his duty not only to conduct the examination of the case, but also to cross-examine the plaintiff's witnesses, including the medical experts. If the attorney's medical knowledge is so limited that he is unable to comprehend the significance of the testimony, the defense will be seriously handicapped. Moreover, such an attorney would be incapable of the thorough analysis of the medical problem, which must serve as a basis for the construction and development of a sound and practical theory of defense.

The task of handling medical expert witnesses is also one which necessitates specialized training. Unless an attorney possesses an understanding of the psychology of medical expert witnesses, the defendant's own witness may do more harm than good. For one thing, medical experts are often accustomed to having their opinions listened to and accepted as authoritative. They are seldom prepared to be confronted with contradiction or expression of doubt as to their judgment. In addition, the expert may be definitely opinionated; and insistence upon personal preference in medical procedure may do much to injure the case. In many instances, the experts for the defendant have not had sufficient opportunity to discuss the case thoroughly and in a group before the time comes to go into court. In such cases, minor discrepancies may appear in their testimony, even though there is no actual disagreement which is of significance. Nonetheless, any such disparity in testimony is sure to be pounced upon by the plaintiff's attorney, and the effect upon the jury may be definitely prejudicial. Obviously medical experts must be encouraged to be fair and impartial. But they must also be simple and direct, they must employ phraseology which will be understandable to the jury, and they must be able to retain complete self-control under cross-examination which may be deliberately irritating.

Far too many malpractice actions have been lost

through poor defense; this is an aspect of the problem which needs more attention, particularly in areas which have become virtual hot-beds of malpractice actions. Wherever a serious threat is made against a physician, a carefully-prepared procedure should be put into effect. Every phase of the case should be thoroughly investigated by experts. All available witnesses should be interviewed, and all records carefully examined while the case is comparatively fresh. It is particularly important that the physician or physicians who succeeded the threatened doctor in the care of the patient should be interviewed.

On the basis of all this evidence, the justice of the claim should be weighed. If the charge of malpractice seems justified, an attempt should be made to settle the case out of court. If the suit is to be fought in court, meticulous attention must be given to the method which is to be used by the defense in handling the medical facts. It is especially important that these facts be given the best possible sequential presentation. It is for this reason that the defense attorney must be equipped with a competent understanding of the medical problem involved. Far more often than not the defendant physician is too much involved emotionally to be able to give real assistance in the formulation of questions to be asked of medical expert witnesses for either side.

Through the development of a sound, capable and intelligent method of defense it will be possible to effect a reduction in the number of malpractice claims. Therefore, it would be difficult to over-estimate the importance of the way in which such claims are handled. Each step toward the formulation of better defense is a major contribution to malpractice prophylaxis.

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#### SULFONAMIDE RESISTANCE\*

For four or five years it has been known that certain bacteria are capable of becoming resistant to the bacteriostatic action of the sulfonamides, a phenomenon similar in many respects to the development of drug-fastness during the arsenotherapy of syphilis. Sulfonamide resistance, at first a test tube curiosity, is rapidly becoming of considerable importance in clinical medicine.

Experimental studies have clarified certain aspects of the development of sulfonamide resistance.<sup>1</sup> Resistance has been demonstrated for many organisms commonly pathogenic for man, including streptococci, staphylococci, colon bacilli, gonococci, and Brucella. *In vivo*, sulfonamide-resistant pneumococci have been developed by serial passage through mice, treated with less than curative doses of sulfapyridine. Organisms made insensitive *in vitro* are also resistant *in vivo*, and vice versa. Although it may be lost when only partially developed, well established resistance is apparently retained indefinitely.

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In humans, sulfonamide-resistant organisms have been reported in pneumococcal pneumonia and meningitis, and recently a fatal case of type seven pneumococcal endocarditis has been reported in which the organism became highly resistant to sulfapyrazine.<sup>2</sup> Prolonged contact between the organisms and the sulfonamides seemed necessary for the development of a high degree of resistance in these cases. Insensitive strains of gonococci have been found to respond poorly to sulfonamide therapy.<sup>3</sup> An interesting recent report from England describes wound infections in a plastic surgery ward, caused by resistant hemolytic streptococci (Lancefield Group A, type 12).<sup>4</sup>

Experiments of one group indicated that gonococci were capable of becoming resistant to sulfanilamide, but not to sulfathiazole; but this statement has been challenged by others, who have isolated sulfathiazole-insensitive strains from patients.<sup>3</sup> Quantitative studies indicate that the development of sulfonamide resistance represents an interaction between the organisms and the one common structural unit of all the sulfonamides, namely the p-amino nucleus, and it seems probable that all organisms susceptible to the bacteriostatic action of the sulfonamides are capable of becoming resistant to all of the sulfonamides.<sup>5</sup> It is for this reason that, in subacute bacterial endocarditis, in which prolonged therapy presumably produces a high degree of resistance, changing from one sulfonamide to another causes no beneficial effect.

The future importance of sulfonamide resistance is uncertain. However, since well established resistance is apparently retained indefinitely, it is conceivable that widespread epidemics might be caused by drug fast bacteria. The therapy of infections, due to insensitive organisms, is thus a challenging problem. It is in such situations that the new agents, penicillin and gramicidin, may find their greatest usefulness, especially in superficial infections caused by gram positive organisms. The rôle of pneumococcal serum in destroying resistant pneumococci is not yet known. These and other therapeutic problems have yet to be studied experimentally and clinically. However, from the standpoint of the practicing physician, it is important to realize that the phenomenon of sulfonamide resistance does exist, and the physician should keep it in mind, in treating patients who do not respond to sulfonamides in the usual manner.

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#### Medical Aid in U.S.S.R. Army

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Smorodintsev and his staff have made important contributions to the early diagnosis of typhus. Other experiments include work on the sterilization of air and the production of liquid oxygen.

The world of medicine has been enriched by discoveries such as these: A soluble preparation of sulphidine, an x-ray device which facilitates the location of foreign bodies in the human organism, a synthetic oil of balsam, and a method of producing antityphus vaccine in large quantities. Other discoveries are being added constantly.

Doctors serving with guerilla detachments behind the German lines combine medical work with fighting. They have contributed this observation to the art of medicine: that the wounded who were compelled to be continuously on the move progressed more favorably than those who could follow the traditional method of enforced rest. Other surprising revelations have been set forth by Professor A. Bogomolets, president of the Ukrainian Academy of Sciences. This savant claims that man's normal life span should be about 150 years. He and his son have prepared an antireticular cytotoxic serum, small doses of which stimulate the system of connective tissue. Their theory is that the struggle for normal longevity is, in the first place, a struggle for healthy connective tissue. The serum is used for accelerating the knitting of broken bones by producing a stimulating effect on the growth of osteoplasts. Its usefulness has been proven in the treatment of delayed healing of ulcers and in combating infections.

Unfortunately, Bogomolets' interesting studies were interrupted with the sudden invasion of Russia by the German barbarians. All scientific institutions immediately reorganized their work to pursue the only purpose of all scientific institutions and all citizens of Russia, to defend their country until the utter defeat of Nazi Germany, thus contributing to the struggle for democracy for all nations whose very existence, science and culture are threatened. The years of patriotic war have shown that the medical profession of the Soviet Union is productive of bold, daring ideas and indefatigable in research.

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#### Educational Requirements of Medical Schools

The tremendous demand for physicians made by the military forces has caused the suggestion that the educational requirements of our medical schools be relaxed, so that doctors may be produced in a shorter period of time. If that suggestion was widely followed, one result would be inevitable—a definite decline in the quality of medical service given the American people. The time required for graduation from an accredited school of medicine, coupled with the hard, continuous application required of students, is our best guarantee of adequate service. Before we lower the standards, which are low enough now, an effort should be made to solve the problem. This problem involves the health of the Americans of tomorrow, no less than of those of today.